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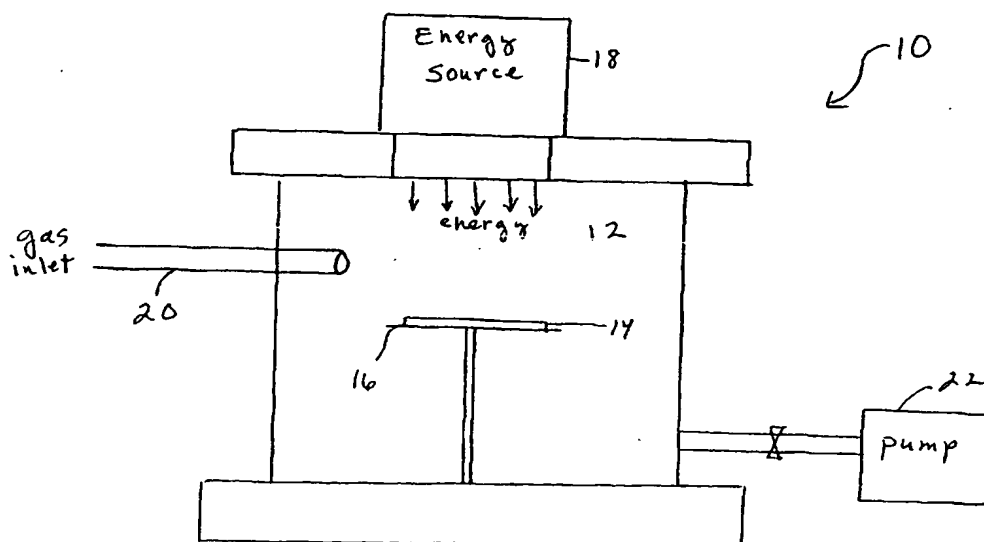
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(54) Title: METHOD FOR ENERGY-ASSISTED ATOMIC LAYER DEPOSITON AND REMOVAL



(57) Abstract: A method for energy-assisted atomic layer deposition and removal of a dielectric film are provided. In one embodiment a substrate is placed into a reaction chamber and a gaseous precursor is introduced into the reaction chamber. Energy is provide by a pulse of electromagnetic radiation which forms radical species of the gaseous precursor. The radical species react with the surface of the substrate to form a radical terminated surface on the substrate. The reaction chamber is purged and a second gaseous precursor is introduced. A second electromagnetic radiation pulse is initiated and forms second radical species. The second radical species of the second gas react with the surface to form a film on the substrate. Alternately, the gaseous species can be chosen to produce radicals that result in the removal of material from the surface of the substrate.

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